

## Oncology

## Xanthogranulomatous cystitis mimicking bladder tumor: A case report

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## A B S T R A C T

Xanthogranulomatous inflammation, as a type of chronic granulomatous inflammation, typically occurs in the gall bladder and kidneys. In this paper, we present a 56-year-old man with Xanthogranulomatous cystitis mimicking bladder malignancy. He was referred to our clinic with the chief complaint of a one-year history of urgency and frequency. CT scan showed a solid lesion in the bladder. The patient underwent complete transurethral resection of the bladder tumor. Microscopic histopathology revealed xanthogranulomatous cystitis. The patient received a course of antibiotic therapy. Follow-up Cystourethroscopy showed normal bladder.

## Introduction

Xanthogranulomatous inflammation, as a type of chronic granulomatous inflammation, typically occurs in the gall bladder and kidneys. It may also occur in many other sites including the colon, appendix, salivary glands, pancreas, brain, ovaries, and endometrium.<sup>1</sup> However, Xanthogranulomatous cystitis (XC) has been recorded as extremely rare. In this paper, we present a case of XC mimicking bladder malignancy.

## Case report

A 56-year-old Iranian man was referred to our hospital with the chief complaint of one-year history of urgency, frequency, dysuria and lower abdominal discomfort. He also had a history of a single episode of gross hematuria.

The patient had no significant past medical history. Digital Rectal Examination (DRE) revealed a benign-feeling normal-sized prostate with no nodules. All other findings on physical examination were normal. The results of laboratory studies including blood hemoglobin and hematocrit, serum electrolytes and renal function tests were within normal limits. Urine analysis showed 10–12 red blood cells and 0–1 white blood cells per high power field. Urine culture and urinary cytology were negative.

He underwent urinary system ultrasonography due to his lower urinary tract symptoms and history of hematuria. Ultrasound imaging showed a calcified bladder mass measuring 45 × 40 mm in size.

Enhanced Computerized tomography (CT) of the abdomen and pelvis showed a solid lesion in the right side of the anterolateral wall of the bladder without perivesical invasion (Fig. 1).

Cystourethroscopy revealed a mass in the right side of the anterolateral wall of the bladder. The bladder capacity was normal. Accordingly, complete endoscopic transurethral resection was performed. The operation was uneventful and the patient was discharged after two days with no complications. Microscopic histopathology revealed chronic inflammatory xanthogranulomatous cystitis (Fig. 2). The patient received trimethoprim/sulfamethoxazole (TMP/SMX) for 2 months. Follow-up cystourethroscopy performed three months after treatment discontinuation of demonstrated normal bladder mucosa without any evidence of a bladder mass.

## Discussion

Xanthogranulomatous is a benign and chronic inflammatory disorder. Xanthogranulomatous is relatively common in the kidneys and gallbladder, but is very rare in the bladder.<sup>2</sup> Based on the authors' knowledge, only 29 cases of adult XC have been reported in the English literature.<sup>3</sup>

Although, the exact etiology of XC is not yet understood, there are certain theories regarding its pathogenesis including immunological mechanisms, foreign body reaction, an urachal remnant, chronic bacterial infection, abnormal response to local tumors, abnormal lipid metabolism and lipid accumulation in macrophages.<sup>1,4</sup>

The histological pattern normally consists of multinucleated giant cells, lipid-laden macrophages (xanthoma cells), cholesterol crystals, polymorphonuclear leukocytes, plasma cells and lymphocytes of polyclonal origin and fibrosis.<sup>5</sup>

The most common symptoms of XC are lower abdominal pain and lower urinary tract symptoms including dysuria, frequency, and

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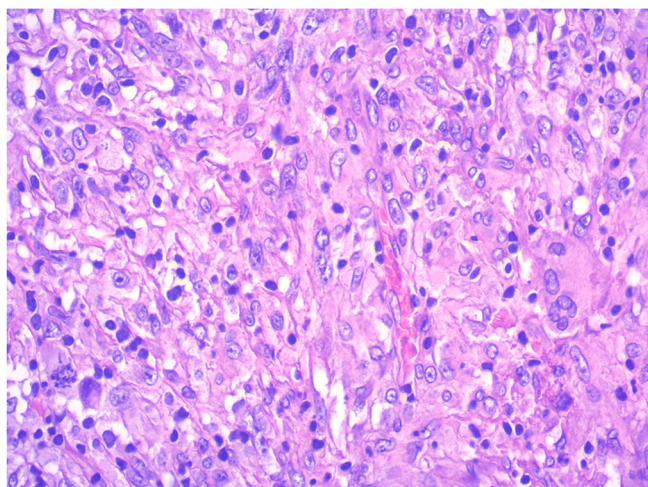
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**Fig. 1.** Enhanced Computerized tomography (CT) of the abdomen and pelvis showed a solid lesion in the right side of the anterolateral wall of the bladder without perivesical invasion.



**Fig. 2.** Microscopic histopathology revealed chronic inflammatory xanthogranulomatous cystitis.

urgency. Uncommon symptoms like hematuria, abdominal mass and

umbilical discharge have also been reported in some cases.<sup>3</sup>

Despite the treatment of choice still not fully determined, clinicians use a combination of broad-spectrum antibiotics, transurethral excision and partial or even radical cystectomy in this respect.<sup>1,5</sup> In the present case, the bladder mass was treated with antibiotics and transurethral resection.

In conclusion, XC, as a rare disorder, must be considered in the differential diagnosis of bladder masses. The diagnosis can be confirmed by histopathological examination. Antibiotics and surgical management are the available treatment options.

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